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# Newark's native son

Police Chief Anthony Campos is at the helm of New Jersey's largest police department

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# Jury's still out on arthritis treatments

■ BY MATT BRZYCKI

Also referred to as "degenerative joint disease," osteoarthritis is the most common type of arthritis. In fact, it's estimated that 20 million American adults have osteoarthritis – and that number is expected to double over the next 20 years.

Matt Brzycki

Osteoarthritis is caused by the breakdown of cartilage (the connective tissue that cushions the ends of the bones that are within a joint) and is characterized by pain, stiffness and limited function. In general, osteoarthritis usually affects the hips, knees and hands. And as older cops are painfully aware, aging is a risk factor for this condition.

**TREATMENTS**

Over the years, various substances have been touted as effective and safe treatments for combating osteoarthritis including flaxseed oil, gamma linolenic acid, dimethyl sulfoxide (a liniment for horses that's better known as "DMSO"), bovine cartilage, shark cartilage and – believe it or not – snake venom. More recently, glucosamine and chondroitin have been promoted as viable treatments for osteoarthritis.

Glucosamine and chondroitin are natural substances that are found in cartilage. It's believed that glucosamine – a combination of glucose (a sugar) and glutamine (an amino acid) – inhibits inflammation and stimulates the growth of cartilage while chondroitin gives cartilage strength and resilience.

**THE RESEARCH**

Of course, anecdotal reports are one thing and scientific studies are another. Let's take a look at what the research says about the efficacy and safety of glucosamine and chondroitin in the treatment of osteoarthritis.

Some studies have found that glucosamine and chondroitin decrease pain more than a placebo. However, other studies have not.

In one study, for instance, 46 subjects (age 20 - 70) who suffered "from regular knee pain of unspecified origin" received either 2,000 milligrams of glucosamine or a placebo (lactose) once per day for 12 weeks. The study found that 88 percent of the glucosamine group reported some degree of relief in knee pain compared to 17 percent of the placebo group.

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But in the largest study to date, 1,583 subjects over the age of 40 received either (1) 1,500 milligrams of glucosamine per day; (2) 1,200 milligrams of chondroitin per day; (3) glucosamine and chondroitin in combination; (4) 200 milligrams of celecoxib (brand name Celebrex) per day; or (5) a placebo (unspecified) for 24 weeks. The study found that glucosamine and chondroitin – alone or in combination – weren't significantly better than the placebo in reducing knee pain by more than 20 percent.

**ARE THEY SAFE?**

Many studies have reported a very high percentage of side effects that are related to the use of glucosamine and chondroitin. In most of the studies, however, the rate of side effects reported by those who used the substances wasn't significantly greater than those who used a placebo.

In one study, for example, 18 percent of the subjects who received glucosamine and 13 percent of the subjects who received a placebo (rice starch) reported side effects. The most prevalent side effects in this study were gastrointestinal distress and joint pain.

In another study, 94 percent of the subjects who received glucosamine and 93 percent of the subjects who received a placebo (unspecified) reported side effects. The most prevalent side effects in this study were abdominal pain, increased blood pressure, diarrhea and fatigue.

Other side effects have been reported in the scientific literature as well. The two most frequent ones are nausea and headaches.

**A CLOSER LOOK**

So on the surface, it would seem as if glucosamine and chondroitin are at least reasonably effective and safe. But before you run out and spend your hard-earned money, it's important to realize that the vast majority of research on these two substances leaves much to be desired.

Numerous studies on these two substances are of low quality. Researchers determined that all 15 of the studies in their mate-analysis on glucosamine and chondroitin had methodological problems and exaggerated the benefits of both substances.

In addition, most of the studies that have examined the safety and efficacy of glucosamine and chondroitin have been of very short duration (less than about four weeks). As a result, the long-term effects of these two substances are unknown.

Finally, a large number of studies on glucosamine and chondroitin were sponsored in some manner by a product manufacturer. Needless to say, any affiliation with product manufacturers casts some suspicion on the findings of a study.

**THE BOTTOM LINE**

Glucosamine and chondroitin have shown some promise in combating osteoarthritis and appear to be relatively safe but at this point in time, the research on these two substances needs to be more convincing. Words to the wise: If you decide to use either of these substances, get the approval of your physician.

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